

## **REMARKS**

Upon entry of this amendment, claims 1-11 and 13-15 are all the claims pending in the application. Claim 12 has been canceled by this amendment.

### **I. Claim Rejections under 35 U.S.C. § 102**

The Examiner has rejected claims 1, 4, 5 and 12-15 under 35 U.S.C. § 102(b) as being anticipated by Lind (U.S. 3,541,451).

Claim 1 has been amended to incorporate the features recited in claim 12, and claim 12 has been canceled. Thus, claim 1 now recites the feature of a control circuit that controls a variable capacitor so that a cutoff frequency or a resonance frequency of the signal generator becomes constant. Applicants respectfully submit that Lind does not disclose or suggest such a feature.

Regarding Lind, Applicants note that this reference discloses an FM receiver circuit that includes a variable center frequency filter 14 disposed between a mixer stage and an intermediate frequency amplifier stage (see col. 2, lines 6-9). As shown in Figs. 1a and 1b of Lind, the mixer stage includes an RF amplifier 11, a local oscillator 13, and a mixer 12; the filter 14 includes a pair of voltage sensitive capacitors 37 and 45; and the IF amplifier stage includes an IF amplifier 15 and a demodulator 17 (see col. 3, lines 36-49).

As shown in Fig. 1b of Lind, an automatic gain control (AGC) bus 23 is connected to the IF amplifier 15, and the output of the demodulator 17 is connected to an automatic frequency control (AFC) bus 20.

As explained in Lind, the exact center frequency provided by the variable center frequency filter 14 is determined by the signal supplied by the AFC bus 20 to the variable capacitors 37, 45 (see col. 3, lines 62-65). In particular, it is disclosed in Lind that the magnitude of the demodulated or audio signal on the AFC bus 20 serves to shift the center frequency of the variable center frequency filter 14 so that its passband is centered at a point synchronized with the instantaneous intermediate frequency (see col. 3, line 72 - col. 4, line 1).

Thus, in Lind, the function of the variable center frequency filter 14 is to shift the center frequency thereof based on a signal received from the AFC bus 20. Accordingly, in Lind, as the signal supplied from the AFC bus 20 to the variable capacitors 37, 45 of the variable center frequency filter 14 is used to change the center frequency thereof, Applicants respectfully submit that Lind clearly does not disclose the feature of a control circuit that controls a variable capacitor so that a cutoff frequency or a resonance frequency of the signal generator becomes constant, as recited in amended claim 1.

Regarding the above-noted feature of the control circuit that controls a variable capacitor so that a cutoff frequency or a resonance frequency of the signal generator becomes constant, Applicants note that, as explained in MPEP §2173.05(g), “a functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used.”

In view of the foregoing, Applicants respectfully submit that Lind does not disclose, suggest or otherwise render obvious at least the above-noted feature recited in claim 1.

Accordingly, Applicants submit that claim 1 is patentable over Lind, an indication of which is kindly requested.

Claims 4, 5 and 13-15 depend from claim 1 and are therefore considered patentable at least by virtue of their dependency.

## **II. Claim Rejections under 35 U.S.C. § 103(a)**

A. The Examiner has rejected claims 2, 3, 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Lind (U.S. 3,541,451). Claims 2, 3, 6 and 7 depend from claim 1. As noted above, Applicants respectfully submit that Lind does not disclose, suggest or otherwise render obvious all of the features recited in claim 1. Accordingly, Applicants submit that claims 2, 3, 6 and 7 are patentable at least by virtue of their dependency.

B. The Examiner has rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Lind in view of El-Hamamsy (U.S. 5,463,285). Claim 8 depends from claim 1. Applicants respectfully submit that El-Hamamsy does not cure the deficiencies of Lind, as discussed above, with respect to claim 1. Accordingly, Applicants submit that claim 8 is patentable at least by virtue of its dependency.

C. The Examiner has rejected claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Lind in view of Shenai (U.S. 5,914,513). Claim 9 depends from claim 1. Applicants respectfully submit that Shenai does not cure the deficiencies of Lind, as discussed above, with

respect to claim 1. Accordingly, Applicants submit that claim 9 is patentable at least by virtue of its dependency.

D. The Examiner has rejected claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Lind in view of JP 06-170368. Claim 10 depends from claim 1. Applicants respectfully submit that JP 06-710368 does not cure the deficiencies of Lind, as discussed above, with respect to claim 1. Accordingly, Applicants submit that claim 10 is patentable at least by virtue of its dependency.

E. The Examiner has rejected claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Lind in view of Ogawa (U.S. 4,758,794). Claim 11 depends from claim 1. Applicants respectfully submit that Ogawa does not cure the deficiencies of Lind, as discussed above, with respect to claim 1. Accordingly, Applicants submit that claim 11 is patentable at least by virtue of its dependency.

### **III. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited.

If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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